BROUKAL, J., MUDr. CSc.

Some transportation problems in medical institutions. Cesk. zdrav. 10 no.10:522-531 '62.

1. Vyzkumny ustav organizace zdravotnictvi v Praze.
(HOSPITAL ADMINISTRATION) (TRANSPORT OF WOUNDED)

STEJSKALOVA, M.; BROUKAL, J.

Method of sterilization in health institutions. Analysis of the quality of used sterilized material. Cesk. hyg. 9 no.6:357-366 Jl '64.

1. Hygienicka a epidemiologicka stanice NV [Narodniho vyboru], Praha a Vyzkumny ustav organizace zdravotnictwi, Praha.

BROUKAL, J., MUDr., CSc.

On the problem of centralization of operating rooms. Cesk. zdrav. 11 no.9:409-418 S '63.

1. Vyzkumny ustav organisace zdravotnictvi v Praze.
(OPERATING ROOMS) (ANESTHESIA)
(RESUSCITATION) (STERILIZATION)

[redacted]

[redacted]AGOVA, J; BROUKAL, J.

1. Hygienic and Epidemiological Station [illegible] (Hygienicko-epidemiologická stanice [illegible]), Prague; 2. Research Institute of Health Organization (Výzkumný ústav organizace zdravotnictví), Prague

Prague, Československá hygiena, No 6, 1[illegible], [illegible]-366

"The Method of Bringing About Sterilization in Foods: Stabilizants."

BROUKAL, J., MUDr, CSc.

Map of the network of health establishments. Cesk. zdrav. 12 no.7/8: 379-385 Ag '64.

1. Vyzkumny ustav organizace zdravotnictvi v Praze.

BROUKAL, J.

2
HERC

New application of the method of differential thermal analysis to the formation of two immiscible liquids in borosilicate glass. Josef Broukal. *Silikáty* 3, No. 1, 14–19 (1959).—The analyses of borosilicate glasses for Si, B, Al, Ca, K, Na, Pb, Mo, and W were made. This method can be used to find a phase sepn. like that in glasses of the Vycor type. Whenever the DTA showed the presence of a phase sepn., the official leaching test would confirm it. It is possible to find the exact boundaries of the miscibility gap as it occurs in tempering, and the changes of these boundaries with tempering time. Werner Jacobson

aht
1/1

JJ

G/005/62/000/012/002/002
D029/D109

AUTHOR: Broukal, Josef

TITLE: Experiments concerning special glasses (glass solders) used in vacuum electronics

PERIODICAL: Silikat Technik, no. 12, 1962, 428 - 435

TEXT: This article was the subject of a lecture held at the meeting "Technical Glasstreatment", arranged by the section "Chemical Engineering" of the KDT, on 31 Aug 1962 in Ilmenau. In the system PbO-B_2O_3-ZnO there exists a group of glass solders which do not crystallise even after repeated fusing. The group is defined by the following compositions (in weight %): 60% PbO, 35% B_2O_3, 5% ZnO; 85% PbO, 10% B_2O_3, 5% ZnO; and 77.5% PbO, 10% B_2O_3, 12.5% ZnO. At a constant ZnO content and with 60 - 90% PbO, the heat dilation coefficient increases by approximately $15 \cdot 10^{-7}$ at an increase of 10% PbO in the range of 20 - 300°C, and the dilatometric deformation point Mg decreases by 50 - 70 degr. The soldering temperature decreases with increasing PbO content and decreasing B_2O_3 content at a constant (5%) ZnO content. Constant (70%) PbO, increasing ZnO

Card 1/3

G/005/62/000/012/002/002
D029/D109

Experiments concerning .....

and decreasing B_2O_3 contents result in a lowered soldering temperature. Constant B_2O_3 (15%), increasing PbO and decreasing ZnO contents result likewise in a lowered soldering temperature. Replacing PbO by B_2O_3 in lead-borate glasses decreases the heat dilatation coefficient and increases the softening point. This can thus be explained: a reduction of PbO reduces also the oxygen ratio R, i.e. it increases the number of connections to each BO_3 or BO_4 group. The chemical resistance is highest at 50 mol% B_2O_3. An addition of fluorides is not recommended since they have no great effect as fusing accelerator and increase the devitrification and reduction inclination and the dilatation of glass solders. Glass solders of the composition 75 - 85% PbO, 10 - 15% ZnO, 5 - 15% B_2O_3 devitrified during a thermic treatment at a temperature of over 400°C. With increasing ZnO (replacing B_2O_3) at a constant (75%) PbO content, the crystallization temperature is shifted to lower values. An increasing PbO content (replacing B_2O_3) at a constant ZnO (10%) content, decreases the crystallization temperature. An increasing PbO content (replacing ZnO) at a constant (10%) B_2O_3 content, reduces essentially the softening temperature of the solder and the crystallization

Card 2/3

Experiments concerning G/005/62/000/012/002/002
D029/D109

temperature as well as the softening temperature of the re-crystallized solder glass. Examinations concerning thermically devitrifyable glass solders will be continued.

ASSOCIATION: Staatliches Glasforschungsinstitut (Government Institute for Glass Research), Hradec Králové, CSSR

Card 3/3

CECH, Bohuslav; BROUKAL, Josef

Kinetics of molybdenum disilicide sintering with admixture of kaolin and quartz. Silikaty 7 no.3:193-205 '63.

1. Vyzkumny ustav pro praskovou metalurgii (for Cech).
2. Statni vyzkumny ustav sklarsky (for Broukal).

BROUKAL, Josef, inz.

Conference of Glass Industries in Minsk, B.S.S.R. Sklar a keramik 13 no.4:105 Ap '63.

BROUKAL, Jindrich

CZECHOSLOVAKIA

MD

Research Institute of the Organization of Health Service (Vyzkumny ustav organizace zdravotnictvi), Prague; Director: R. Palec, MD.

Prague, Prakticky Lekar, No. 18, 1962, pp 792-795

"Centralization of Certain Services in Health Installations"

BROUKOVA, V.

"Gemaux, a new decorating technique." P. 86.

SKLAR A KERAMIK. (Ministerstvo lehkeho prumyslu). Praha, Czechoslovakia, Vol. 9, No. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

BROUL, J.

"40 years of mechanical production of vertically drawn plate glass in Czechoslovakia and in other parts of the world." P. 114.

SKLAR A KERAMIK. (Ministerstvo lehkeho prumyslu). Praha, Czechoslovakia, Vol. 9, No. 4, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

BROUL, J.

A close relation between school and life. p. 237.

SKLAR A KERAMIK. (Ministerstvo lehkeho prumyslu) Praha, Czechoslovakia, Vol. 9, no. 8, Aug. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

BROUL, Julius, inz.

Operational defects of cooling kilns in continuous production of cast glass. Zklar a keramik 12 no.8:243-244 Ag '62.

1. Vyrobni hospodarska jednotka Ploche sklo, Teplice.

BROUL, Julius, inz.

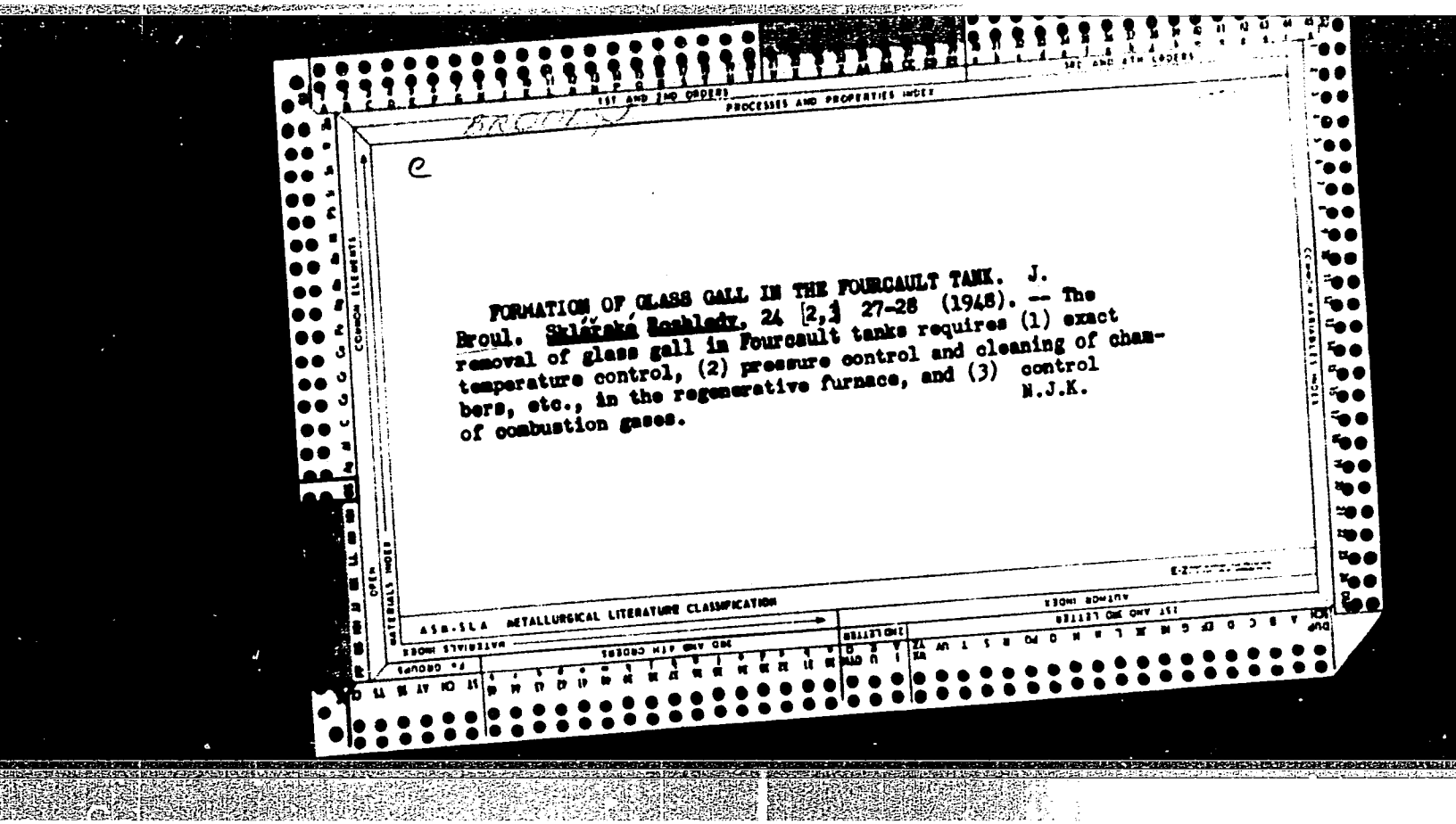
Progressive trends in drawn plate glass technology. Sklar a keramik 14 no.4:116-118 Ap '64.

1. Ploche sklo National Enterprise, Teplice.

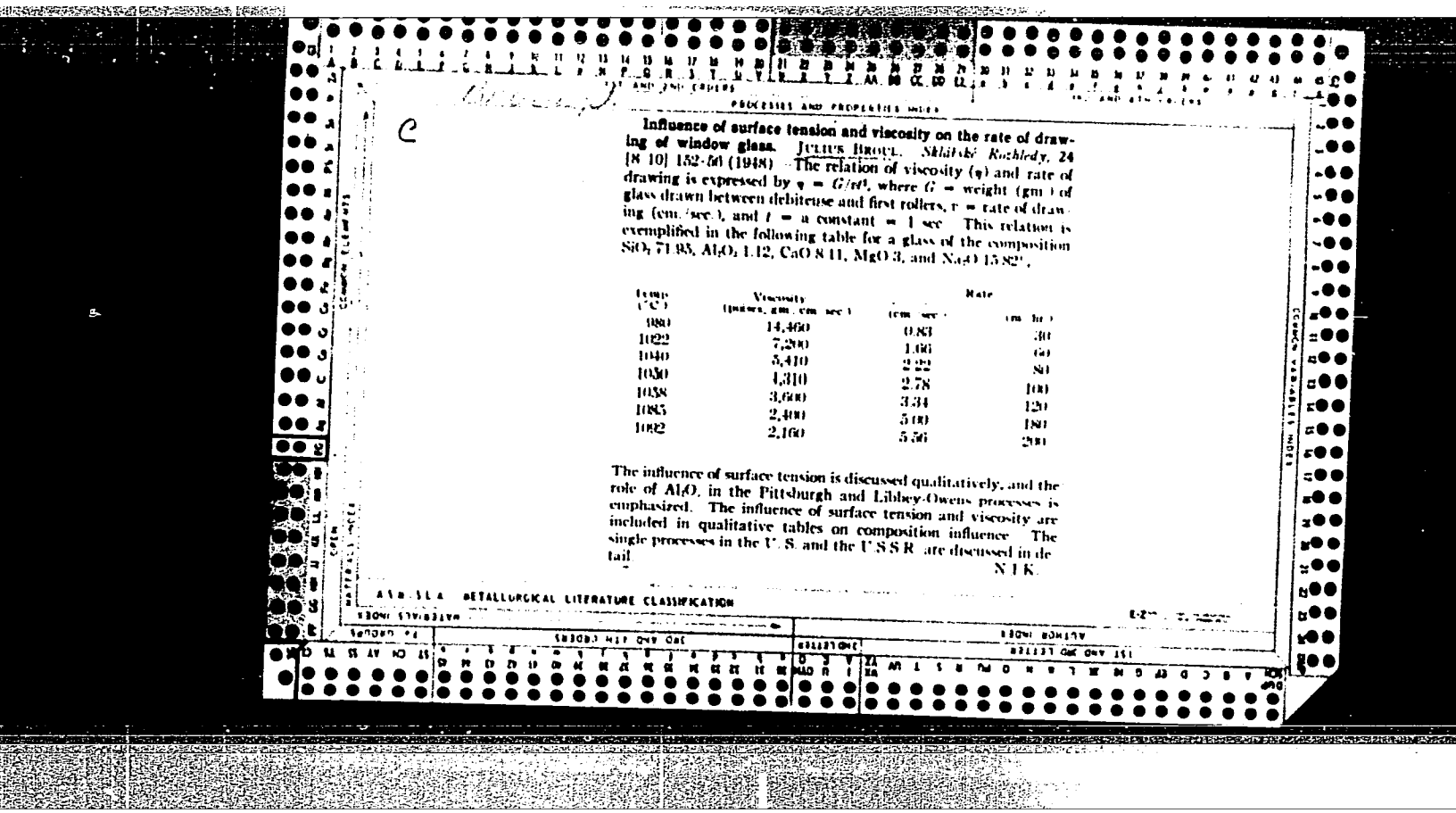
BROUL, Julius, inz.

Manufacture of patterned glass casting cylinders. Sklar a keramik 14 no. 6:172-173 Je '64.

1. Research and Development Institute of Flat Glass of the Ploche sklo National Enterprise.



FORMATION OF GLASS GALL IN THE FOURCAULT TANK. J. Broul. Sklářská Rozhledy, 24 [2,] 27-28 (1948). — The removal of glass gall in Fourcault tanks requires (1) exact temperature control, (2) pressure control and cleaning of chambers, etc., in the regenerative furnace, and (3) control of combustion gases. N.J.K.



Influence of surface tension and viscosity on the rate of drawing of window glass. JULIUS BROUL. *Sklářské Rozhledy*, 24 [8-10] 152-60 (1948). The relation of viscosity (η) and rate of drawing is expressed by $\eta = G/v^2t$, where G = weight (gm.) of glass drawn between debiteuse and first rollers, v = rate of drawing (cm./sec.), and t = a constant = 1 sec. This relation is exemplified in the following table for a glass of the composition SiO$_2$ 71.93, Al$_2$O$_3$ 1.12, CaO 8.11, MgO 3, and Na$_2$O 15.82%.

Temp. (°C.)	Viscosity (poises, gm./cm./sec.)	Rate (cm./sec.)	(in./hr.)
980	14,460	0.83	30
1022	7,280	1.66	60
1040	5,410	2.22	80
1050	4,310	2.78	100
1038	3,600	3.34	120
1085	2,400	5.00	180
1082	2,160	5.56	200

The influence of surface tension is discussed qualitatively, and the role of Al_2O_3 in the Pittsburgh and Libbey-Owens processes is emphasized. The influence of surface tension and viscosity are included in qualitative tables on composition influence. The single processes in the U. S. and the U.S.S.R. are discussed in detail.

N.I.K.

BROUL, J.

The drain; an important factor in every glass furnace, Pt. 1, p. 97, SKLAR A KERAMIK (Ministerstvo lehkeho prumyslu) Praha, Vol. 4, No. 4, Apr. 1954

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

BROUL, J.

The drain, an important factor in every glass furnace. Pt. 2. p. 154.

SKLAR A KERAMIK. (Ministerstvo lehkeho prumyslu) Praha, Czechoslovakia
Vol. 4, no. 6, June 1954

Praha, Czechoslovakia

East European Accessions List Vol. 5, No. 1 January 1956

BROUL, J.

Assuring operation of glas furnaces using generator gas. p. 254. SKLAR A KERAMIK. (Ministerstvo lehkeho prumyslu) Praha. Vol. 5, no. 11, Nov. 1955.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

BROUL, J.

Combustion of generator gas. p. 4

SKLAR A KERAMIK Vol. 6, no. 1, Jan. 1956

Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

ERCUL, J.

ERCUL, J. Operational defects in the generator station. p. 304.
The Por Glass Technical Creative Center. p. 313.

Vol. 6, No. 12, Dec. 1956.
SKLAR A KERAMIK.
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 3, March 1957

BROUL, J.

Coal economy and premium system of employees at generator stations. p.132. (Sklar A Keramik, Vol. 7, No. 5, May 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

HOFRICHTER, Pavel, inz.; BROUL, Jaroslav, inz.

Laboratory investigation of mechanical characteristics of rocks. Geol pruzkum 6 no.8:238-240 Ag '64

1. Higher School of Mining, Ostrava.

BROUL, Julius, inz. (Teplice)

New graduates of the Industrial School in Teplice. Sklar a keramik 14 no.1, 321-322 N '64.

ACC NR: AP5026339 SOURCE CODE: CZ/0013/65/000/010/0315/0316

AUTHOR: Broukal, Josef (Engineer; Candidate of sciences)

ORG: none

TITLE: Glass ceramics discussed at glass symposium in Berlin

SOURCE: Sklar a keramik, no. 10, 1965, 315-316

TOPIC TAGS: glass, solder, thermal expansion, glass ceramic, ceramic type glass, photosensitive glass, glass symposium

ABSTRACT: A symposium on glass ceramics was organized and held at the Institute for Applied Silicate Research of the German Academy of Sciences, Berlin, on 22 June 1965. Sixty experts from East Germany, and guests from Austria, Hungary, and Czechoslovakia participated. A general survey of crystalline glass materials, photosensitive glass, and crystalline glass solder was presented by Dr. W. Hainz (Institute for Applied Silicate Research, DAW, Berlin). Dr. Eng. B. Locsei (Eaaki, Budapest) discussed the possibilities for controlled crystallization of glass ceramics and reported that a large number of six to eight oxides can favorably influence the controlled crystallization and improve chemical properties

Card 1/2

ACC NR: AP5026339

when added in small amounts (1%). After reviewing previously published material, Eng. K. Gerth (VEB Jena Glass Works, Schott and Gen., Jena) explained the main differences between the controlled crystallization of photosensitive glass and ceramic-type glass. Graduate physicist W. Skatulla (VEB Jena Glass Works, Schott and Gen., Jena) illustrated methods of evaluating electronmicroscope pictures of crystalline glass materials with slides. Thermal expansion in ceramic glass was discussed by Eng. P. O. Kunth (Institute for Applied Silicate Research DAW, Berlin). Eng. J. Broukal (SVUS, Hradec Kralove) presented a survey on research on crystalline glass solder and the technology of their production. Photoglass ceramic research was reviewed by Chemical engineer G. Solow (Institute for Applied Silicate Research, DAW, Berlin), who disclosed that fine glass webbing with a minimal aperture of 40 μm has been produced by his institute. The basic theory for the creation of photographic pictures in photosensitive glass was presented by Graduate physicist H. Korn (Institute for Applied Silicate Research, DAW, Berlin). The concluding statements were made by Dr. Klaus Kuhne.

SUB CODE: 11, 09/SUBM DATE: 18Nov65/

Card 2/2

BROUL, Julius, inz.

Technical School of the Glass Industry in Weisswasser. Sklar a keramik 15 no.2:54-55 F '65.

BROULIK, B.

RB 63 semiautomatic turret lathe. p.333.

STROJIRENSKA VYROBA. Praha, Czechoslovakia. Vol. 7, no. 8, August, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 11, November 1959.

Uncl.

CZECH

J Determination of small amounts of oxygen in butadiene

gas. I. Pech, D. Broulík, and P. Menšík. *Chem. Průmysl* 4(29), 152-3(1954).—The polarographic method was modified to enable the detn. of low O concns. in butadiene under 1% vol.
L. A. Helwich

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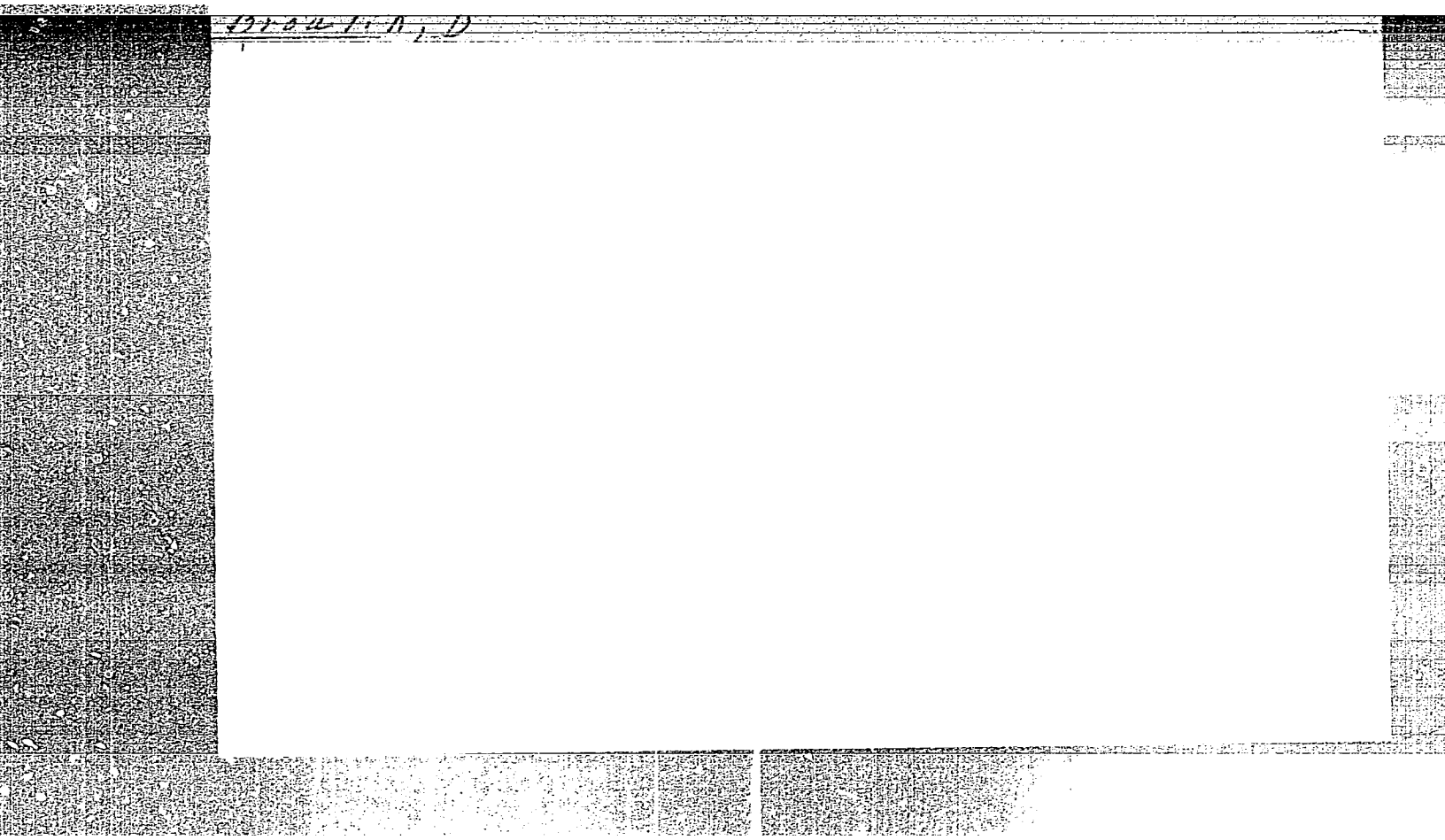


BROULIK, F.

"The Institute for the Mechanization of Mining helps our mines."
Uhli, Praha, Vol 3, No 9, Sept. 1953, p. 246

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. ofCongress

"New people, new methods in surface mines."
Uhli, Praha, Vol 3, No 9, Sept. 1953, p. 251

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

BROULIK, F.

Institute of Mine Mechanization, its purpose and function, p. 245, UHLI (Ministerstvo paliv a energetiky) Praha, Vol. 5, No. 7, July 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

NEUWIRT, J.; POKORNY, Zd.; BROULIK, P.; SULC, K.

Effect of ionizing radiations on proteins in radio-sensitive tissues. Acta univ. carol. [med.] Suppl. 14:89-94 '61.

1. Ustav pro vseobecnou patologii fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof. dr. J. Hepner.
(RADIATION INJURY exper) (PROTEINS metab)

(3)

CZECHOSLOVAKIA

TRAVNICEK, T., NEUWIRT, J., BOROVA, J., BROULIK, P., TABORSKY, J; Institute of Pathological Physiology, Faculty of General Medicine, Charles University (Ustav Patologicke Fysiologie Fak. Vseob. Lek. KU) Prague.

"Changes in Proteins of Blood Plasma During Loss of Blood in Rats."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 2, Feb 66, pp 119-120

Abstract: Experiments on 91 male rats indicated that the level of total globulins decreases proportionately during the loss of blood and even 90 minutes after its end the normal state is not fully established. Albumin level does not decrease as rapidly as that of globulins and after 90 minutes tends to reach normal levels if the loss of blood did not exceed the survival level. 1 Figure, 4 Western, 1 Czech reference. Submitted at "16 Day of Physiology" at Kosice, 28 Sep 65.

1/1

CZECHOSLOVAKIA

PACOVSKY, V.; KOMARKOVA, A.; BROULIK, P.; HRBKA, J.; 3rd Internal Clinic, Faculty of General Medicine, Charles University (III. Interni Klinika Fak. Vseob. Lek. KU), Prague, Head (Prednosta) Member of Academy J. CHARVAT; Central Biochemical Laboratories, Faculty Hospital, Krajsky Instituto of National Health (Ustredni Biochemicke Laboratore Fakultni Nemocnice KUNZ), Prague, Head (Vedouci) Dr A. KOMARKOVA.

"Acquired Insensitivity of Renal Tubulus to the Exogenous Parahormone in Primary Hyperparathyroidism. A New Test in Differential Diagnosis of the Hyperfunction of the Accessible Corpuscles."

Prague, Casopis Lekaru Ceskych, Vol 105, No 26, 24 Jun 66, pp 704 - 706

Abstract: Renal tubulus in primary hyperparathyroidism is constantly subjected to increased amounts of parahormone. Tubular phosphate resorption (TPR) and Tm of phosphates is reduced, and there is no response to administration of exogenous parahormone. In chronic pyelonephritis response to exogenous parathormone reduces the TPR and Tm % of phosphates; the response in hypercalcemia is reduction of TPR%. 2 Tables, 2 Western, 4 Czech references.

1/1

CZECHOSLOVAKIA

PACOVSKY, V.; KOMARKOVA, A.; DUBOVSKY, J.; HRBA, J.; BROULIK, P.; 3rd Internal Clinic, Faculty of General Medicine, Charles University (III. Interni Klinika Fakulty Vseobecneho Lekarstvi KU), Prague, Head (Prednosta) Member of Academy J. CHARVAT; Central Biochemical Laboratories, Faculty Hospital Krajsky Institute of National Health (Ustredni Biochemicke Laboratore Fakultni Nemocnice KUNZ), Prague, Head (Prednosta) Dr A. KOMARKOVA.

"Pseudohypoparathyroidism - A Primary Defect of the Renal Tubule."

Prague, Casopis Lekaru Ceskych, Vol 105, No 34, 26 Aug 66, pp 922 - 924

Abstract [Authors' English summary modified]: Influence of exogenous parathormone on the renal clearance of phosphates and on the urinary excretion of hydroxyproline and citric acid in pseudohypoparathyroidism, post-operative hypoparathyroidism, and in healthy controls was investigated. Direct evidence was found proving that the primary defect in pseudohypoparathyroidism is the isolated lack of sensitivity of the tubule to parathormone, while the other target organ - the bone- responds normally. The use of this test in diagnosis is discussed. 1 Figure, 1 Table, 4 Western, 5 Czech references.

1/1

Hematology

CZECHOSLOVAKIA UDC 616.61-008.64-036.12:616.155.194

NEUWIRTOVA, R.; VALEK, A.; TOMASEK, R.; BROULIK, P.; 2nd Internal Clinic, Faculty of General Medicine, Charles University (II. Interni Klinika Fak. Vseob. Lek. KU), Prague, Chief (Prednosta) Prof Dr F. HERLES; Institute of Experimental Pathology Fac. of Gen. Med. Charles University (Ustav Experimentalni Patologie Fak. Vseob. Lek. KU), Prague, Chief (Prednosta) Prof Dr T. TRAVNICEK.

"Red Cell Formation in Patients after Prolonged Dialysis in Chronic Renal Insufficiency."

Prague, Casopis Lekaru Ceskych, Vol 105, No 51, 16 Dec 66, pp 1393 - 1397

Abstract [Authors' English summary modified]: Prolonged dialysis helps the formation of red blood cells in patients suffering from renal insufficiency. The reduction in the retention of break-down products of nitrogen metabolism improves erythropoiesis, but the hemolytic effect of erythrocytes is not eliminated. Regeneration of the bone marrow is not intensive enough to improve anemia. When the dialysis with the artificial kidney is satisfactory hemoglobin can be maintained above 9g%. 1

BROULIK, R.

Film and composition type resistors.

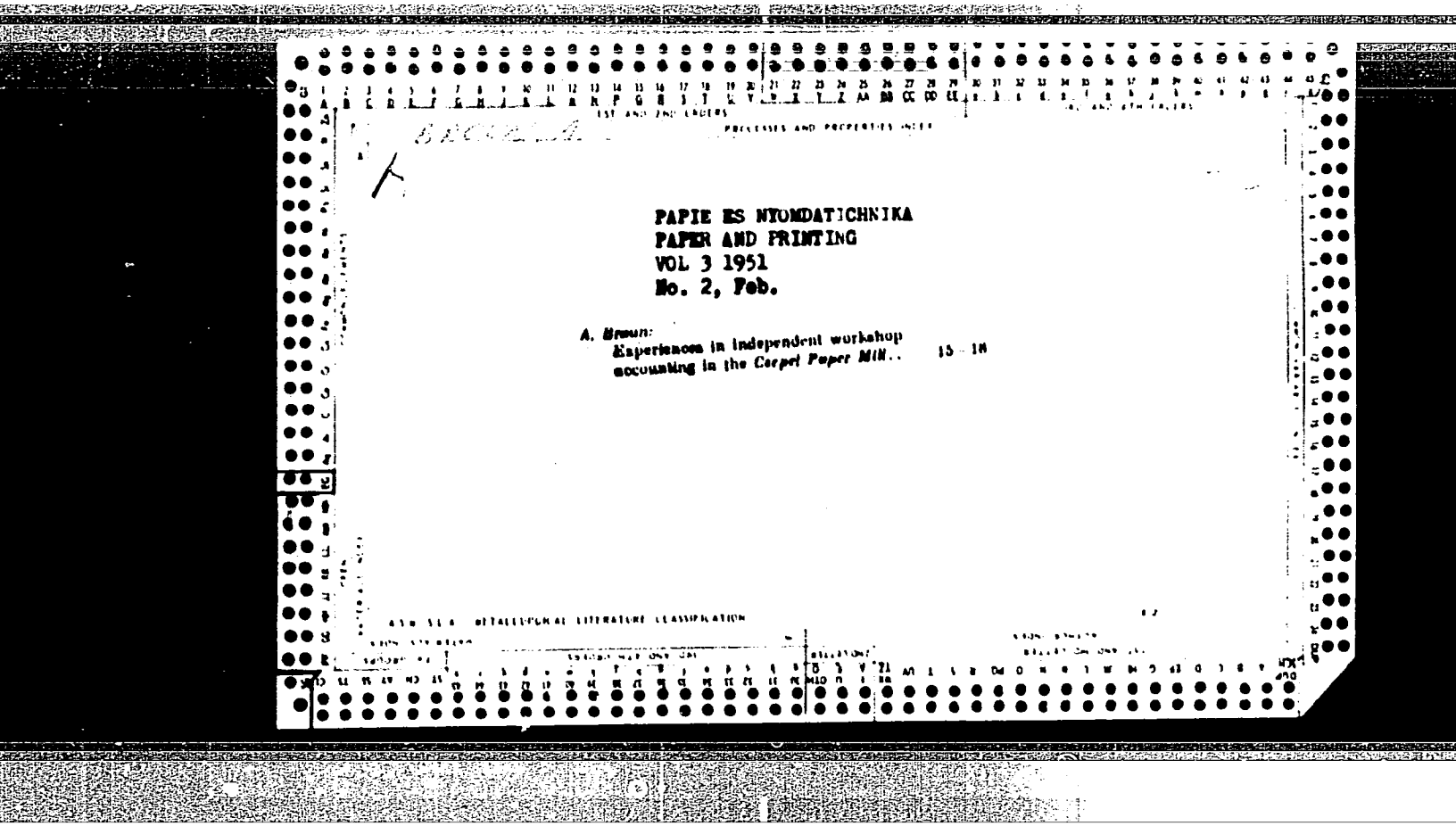
P. 727. (SLABOPROUDY OBZOR) (Praha, Czechoslovakia) Vol. 18, no. 10, Oct. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

BROULIM, I.

"Technical and Economical Standards of Material." p. 11. "The Railroad Operated by Young Pioneers in the New Hungary." p. 12 (ZELEZNICE, Vol. 3, No. 1, 1953) Praha, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4, April 1954. Unclassified.



PAPIE ES NYOMDATICHNIKA
PAPER AND PRINTING
VOL 3 1951
No. 2, Feb.

BROUN, A.G.; YEMEL'YANOV, V.N., kandidat meditsinskikh nauk

Dispensary services for the rural population and workers of machine-tractor stations. Sov. med. 18 no.8:39-42 Ag '54. (MLRA 7:8)

1. Iz Yaroslavskogo meditsinskogo instituta (dir. D.P.Telkov) i Yaroslavskoy oblastnoy klinicheskoy bol'nitsy (glavnyy vrach Z.M. Kunitsyna)

(RURAL CONDITIONS,
in Russia, dispensary serv.)
(OUTPATIENTS SERVICE
in Russia, dispenseries in rural areas)

BROUN, A.G., dotsent

Rare location and unusual etiology of a urinary fistula. Vest. khir. 76 no.11:133-134 '55. (MLRA 9:4)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav.-prof. V.P. Mateshuk) Yaroslavskogo meditsinskogo instituta.

(BLADDER, fistula
rare etiol. & locality)
(FISTULA,
bladder, rare etiol. & locality)

BROUN, A.G., kand.med.nauk

Complicated pelvic fracture in a 12-year-old child. Khirurgiia 39 no.4:145-146 Ap'63 (MIRA 17:2)

1. Iz Yaroslavskogo oblastnogo gospitalya dlya invalidov Otechestvennoy voyny (nachal'nik G.Ye. Lopatukhin) i kafedry urologii (zav. - zasluzhennyy deyatel' nauki prof. A.P. Frunkin [deceased]) TSentral'nogo instituta usovershenstvovaniya vrachey.

S/079/60/030/05/66/074
B005/B126

AUTHORS: Kheyfits, L. A., Moldovanskaya, G. I., Broun, E. V., Belov, V. N.

TITLE: Analyses in the Field of Terpenophenols. III. Analyses of the Condensation Products of Camphene With Phenol

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 5, pp. 1716-1721

TEXT: The authors examined the composition and structure of the reaction products that are formed by the condensation of camphene with phenol in the presence of a solution of borontrifluoride in glacial acetic acid. After standing for a long time a crystalline substance separates from the fractions of the vacuum distillation of the resin that is formed by this condensation; in pure state it forms bright, colorless needles, which melt at 103°. This product was isolated for the first time by two of the authors together with E. A. Simanovskaya. It was identified as p-isobornyl phenol. The oil from which this product separates, crystallizes again gradually after the separation of the p-isobornyl phenol and after several months forms a crystalline substance with a melting point of 79°. The authors were able to show that

this compound is o-isobornyl phenol. Since the described separation of both isomeric isobornyl phenols is very difficult, the authors worked out a more suitable and easier method of isolating both compounds in pure state. In aqueous lyes both compounds are insoluble; but in aqueous-alcoholic lyes the para-isomers are more readily soluble than the ortho-isomers, which fact can be used for the separation. In order to prove the structure of the two compounds in detail, the authors took infrared absorption spectra of solutions of both isomeric compounds in carbon tetrachloride and in bromoform (Fig. 1). The analysis of the spectra is given in detail. Fig. 2 shows the ultraviolet absorption spectra of both isobornyl phenols. The assumed structure was also confirmed by measuring the dipole moments of the two compounds and their dibromides. It was established that 70% o-isobornyl phenol and 20% p-isobornyl phenol are formed by this condensation. The remaining 10% is probably composed partly of isobornyl acetate, which can form on the acetylation of camphene with acetic acid in the presence of BF_3. All the reactions carried out are described in detail in the experimental part. N. I. Kursanov is mentioned (Ref. 19). The authors thank A. V. Iogansen for valuable advice concerning the spectroscopic analyses, and Ye. A. Shott-L'vova for the

Analyses in the Field of Terpenophenols. III. Analyses of the Condensation Products of Camphene With Phenol

S/079/60/030/05/66/074
B005/B126

measurement of the dipole moments. There are 2 figures and 24 references, 9 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv (All-Union Scientific Research Institute for Synthetic and Natural Aromatic Substances)

SUBMITTED: April 16, 1959

Card 3/3

KHEYFITS, L.A.; SHULOV, L.M.; BROUN, E.V.; BELOV, V.N.

Terpenophenols. Part 4: Products of the condensation of camphene with o-cresol. Zhur. ob. khim. 31 no. 2:672-677 F '61. (MIRA 14:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv.
(Camphene) (Cresol)

L 8209-66 EWT(d)/EWT(l)/EEC(k)-2/T/ IJP(c)

ACC NR: AP5013858 SOURCE CODE: UR/0368/65/002/004/0324/0330

44,55

AUTHOR: Broun, E. V.

ORG: none

TITLE: Calculation of random errors in measuring the integral intensities of infrared spectra 9M

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 4, 1965, 324-330

21,44,55

TOPIC TAGS: IR spectrum, radiation intensity, error statistics, error minimization

ABSTRACT: The author considers random errors in measurement of the integral intensities of infrared spectra as a function of the method and conditions of measurement. Conditions of optimum extrapolation are studied and optimum conditions for measurement of integral quantities are determined. From the standpoint of minimizing random errors, optimum conditions for measuring integral quantities are spectra with a mean transmittance of $0.30 \leq \overline{T} \leq 0.70$, which corresponds to transmission in the maximum bands of ~0.10. Optimum conditions are determined for measuring the structureless bands of solutions and liquids without extrapolation as well as for extrapolation measurements of intensities. By making measurements under optimum conditions, the accuracy in determining integral intensities can be raised considerably. The optimum conditions

UDC: 535.33

Card 1/2

L 8209-66

ACC NR: AP5013858

defined in the paper give a great deal of latitude and may almost always be used.
Orig. art. has: 4 figures, 2 tables, 2 formulas.

SUB CODE: OP,MA/ SUBM DATE: 26May64/ ORIG REF: 006/ OTH REF: 002

nw
Card 2/2

BROUN, E.V.; IOGANSEN, A.V.

Intensity of the γ_4 band in benzene gas and solutions. Opt. i spektr. 18 no.4:610-613 Ap '65. (MIRA 18:8)

IOGANSEN, A.V.; BROUN, E.V.

Structural-group analysis by infrared absorption spectra; determination of methyl groups in saturated hydrocarbons and alkyl benzenes. Trudy Kom.anal.khim. 13:367-379 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Hydrocarbons—Absorption spectra) (Methyl group)
(Benzene derivatives)

BROUN, E.V.; IOGANSEN, A.V.

Check for the photometric scale of double-beam infrared apparatus. Zav. lab. 29 no.10:1264-1266 '63. (MIRA 16:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

L 21181-65 EWT(m)/EWP(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL/ASD(a)-5/SSD(c)/AFWD(t)/RAEM(a) WW/RM
ACCESSION NR: AP5003022 S/0051/65/018/001/0038/0044

AUTHOR: Iogansen, A. V.; Broun, E. V.; Litovchenko, G. D.

TITLE: Intensities of infrared absorption bands in gases and in solutions

SOURCE: Optika i spektroskopiya, v. 18, no. 1, 1965, 38-44

TOPIC TAGS: ir absorption, absorption band, ir intensity, absorption in gas, absorption in solution, absolute intensity

ABSTRACT: The authors first discuss the expected changes in the absolute intensity of absorption (A) in a gas-solution transition, due to the inter-molecular interaction, in a non-polar liquid. Calculations based on dielectric-polarization theories call for the absorption intensity to be 25--50% higher in the solution than in the gas. However, a comparison of the intensities does not bear out this conclusion, and the results indicate that as a rule the absolute intensities for the absorption of strong bands in non-polar solvents coincide with those in the gas. In addition to making the comparison with data by others, the authors also measured the absolute intensities for strong bands in vapors of volatile liquids, using a modified technique which they describe. The results

Card 1/2

L 21181-65
ACCESSION NR: AP5003022

4

are compared for carbon tetrachloride, cyclohexane, carbon disulfide, nitrous oxide, chloroform, acetane, nitromethane and methyl formate. Orig. art. has: 3 figures, 2 tables, and 2 formulas.

ASSOCIATION: None

SUBMITTED: 09Aug63 ENCL: 00 SUB CODE: OP

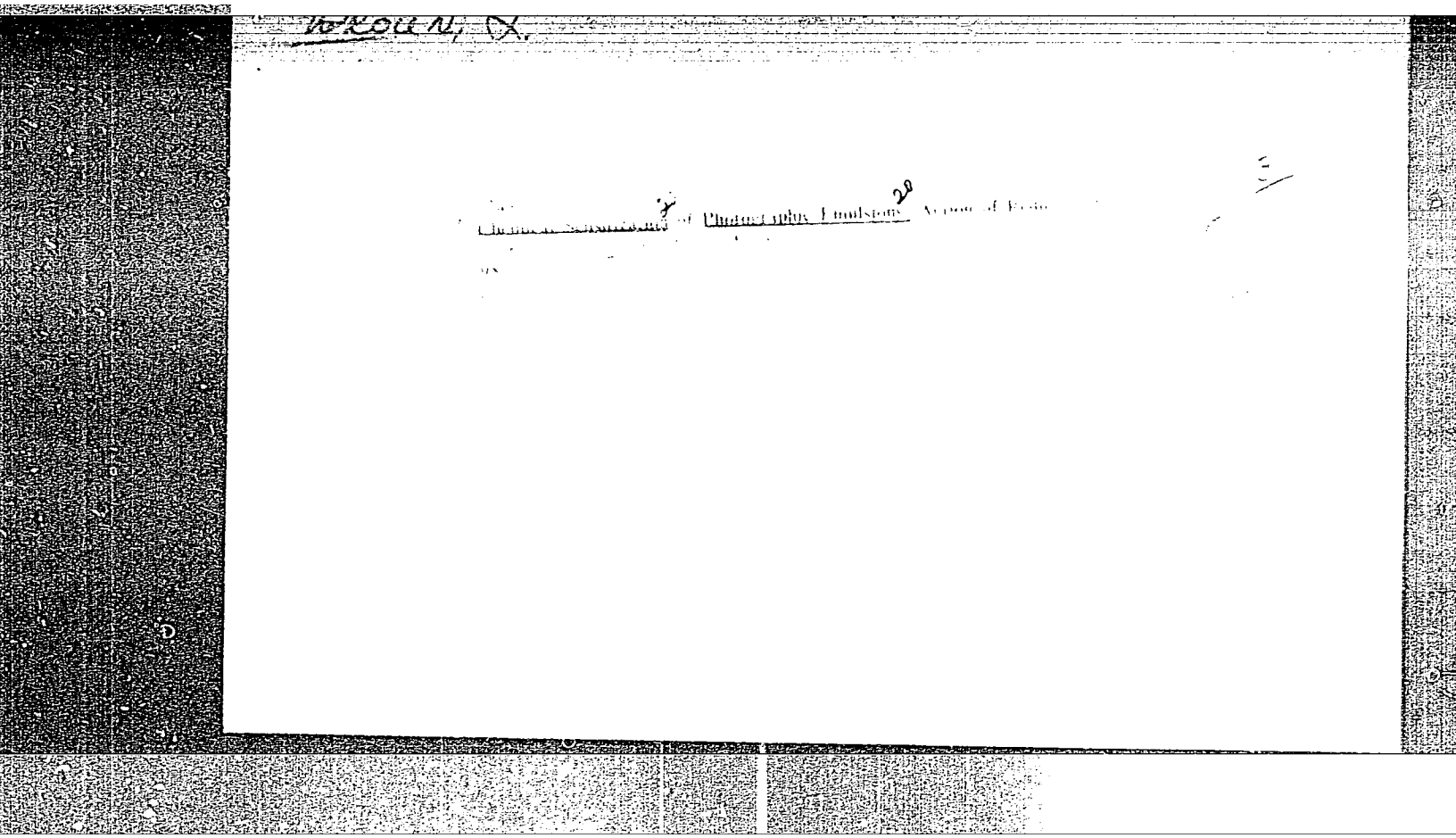
NR REF SOV: 009 OTHER: 027

Card 2/2

BROUN, K.; DMITRIYEV, K.; YEVTYUKHOV, K.; VOLKOV, Yu., starshiy nauchnyy sotrudnik

Discussing the article "Methods of drawing-up industrial safety rules and their contents." Okh. truda i sots. strakh. no.6:47-54 Je '59. (MIRA 12:10)

1.Starshiy inzhener po tekhnike bezopasnosti ordena Trudovogo Krasnogo Znameni tresta "Yuzhuraltyazhstroy" Orenburgskogo sovnarkhoza, g.Orenburg (for Broun). 2.Tekhnicheskiy inspektor stantsii Sinarskaya Yuzhno-Ural'skoy zheleznoy dorogi (for Dmitriyev). 3.Zamestitel' nachal'nika Spetsinspektsii Gosgortekhnadzora RSFSR (for Yevtyukhov). 4.Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov, Leningrad (for Volkov).
(Industrial safety)



MITEL'MAN, Ye.L.; SOLODOVNIKOV, V.Ya.; STEPANOV, A.Ya., retsenzent; BROUN, M.L., retsenzent; ETCHIN, G.A., redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Financial operations in machine construction plants] Finansovaia deiatel'nost' mashinostroitel'nogo zavoda. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 219 p. [Microfilm] (MLRA 8:1)

(Machinery industry--Finance)

BROUN, M.M. NAYDENOV, L.N. MALTABAR, L.M.

Viticulture - Moldavia

On the "Denevitsa" state nursery farm. Vin. SSSR 12 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

BROUN, M. Ya.

PA 47T32

USSR/Welding, Arc Physics

Mar 1947

"Physics of the Arc-welding System," M Ya Broun, 3 pp

"Avtogennoye Delo" No 3, 20, 22

Purely mathematical discussion

47T32

[illegible], N. Ya.

The thermic theory in arc welding. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry 1951. 123 p. (52-17691)

TK4660.B77

USSR/Engineering - Welding, Processes Aug 51

"On the Mechanism of Striking the Electric-Welding Arc," M. Ya. Broun, Engr, Prof G. I. Pogodin-Alekseyev

"Avtogen Delo" No 8, pp 16,17

Interprets development of elec arc in welding process as result of active role of thermal ionization in this process. Rapidly rising temp causes violent sublimation of metal from its surface, and gap between electrode and piece to be welded is filled with metal vapors, whose ionization potential is considerably lower than

200T52

USSR/Engineering - Welding, Processes (Contd) Aug 51

that of air components. Temp of vapors is high and possibility of their ionization is also high. Electrons emitted from cathode ionize metal vapors and provide for rapid development of arc.

200T52

BROUN, M.YA.

BROUN, M.Ya., kand.tekhn.nauk; SHITOVA, A.Ye., inzh.

Contactless electric moisture meters. Der.prom. 8 no.2:9-10 F '59. (MIRA 12:2)

1. L'vovskiy lesotekhnicheskiy institut.
(Moisture--Measurement)

BROUN, M.Ya.

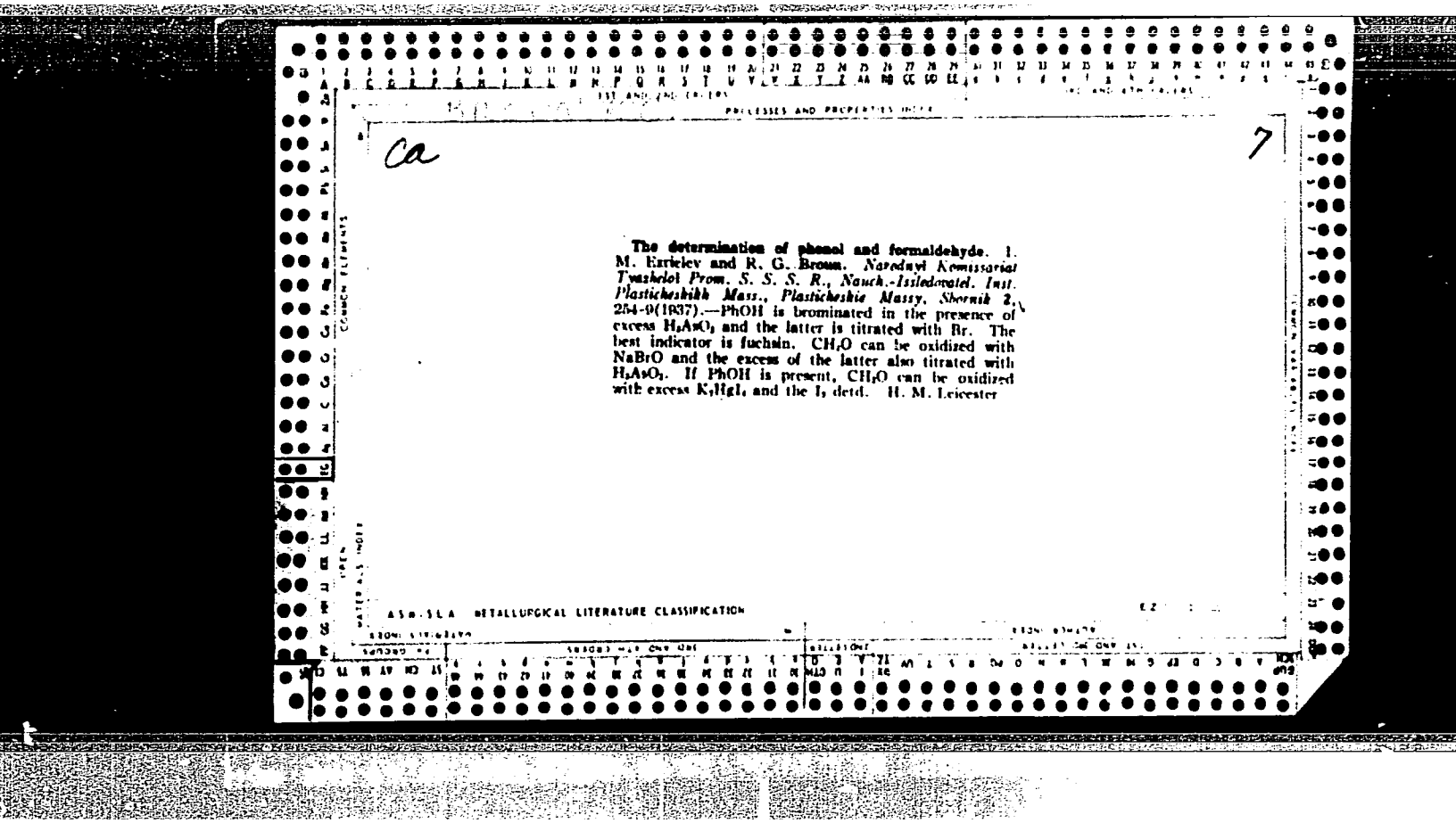
New method for measuring the moisture content of materials with nonelectronic conductance. Priborostroenie no.12:23-25 D '61. (MIRA 14:12)

(Moisture--Measurement)

BROUN, M.Ya., kand.tekhn.nauk

Automatic control of lumber drying conditions. Bum.i der.prom. no.4:10-13 O-D '62. (MIRA 15:12)

1. L'vovskiy lesotekhnicheskiy institut.
(Lumber--Drying) (Automatic control)



Ca

7

The determination of phenol and formaldehyde. I. M. Ezrielev and R. G. Broun. *Narodnyi Komissariat Tyazhelol Prom. S. S. S. R., Nauch.-Issledovatel. Inst. Plasticheskikh Mass., Plasticheskie Massy, Sbornik* 2, 254-9(1937).—PhOH is brominated in the presence of excess H_3AsO_3 and the latter is titrated with Br. The best indicator is fuchsin. CH_2O can be oxidized with NaBrO and the excess of the latter also titrated with H_3AsO_3. If PhOH is present, CH_2O can be oxidized with excess K_2HgI_4 and the I_2 detd. H. M. Leicester

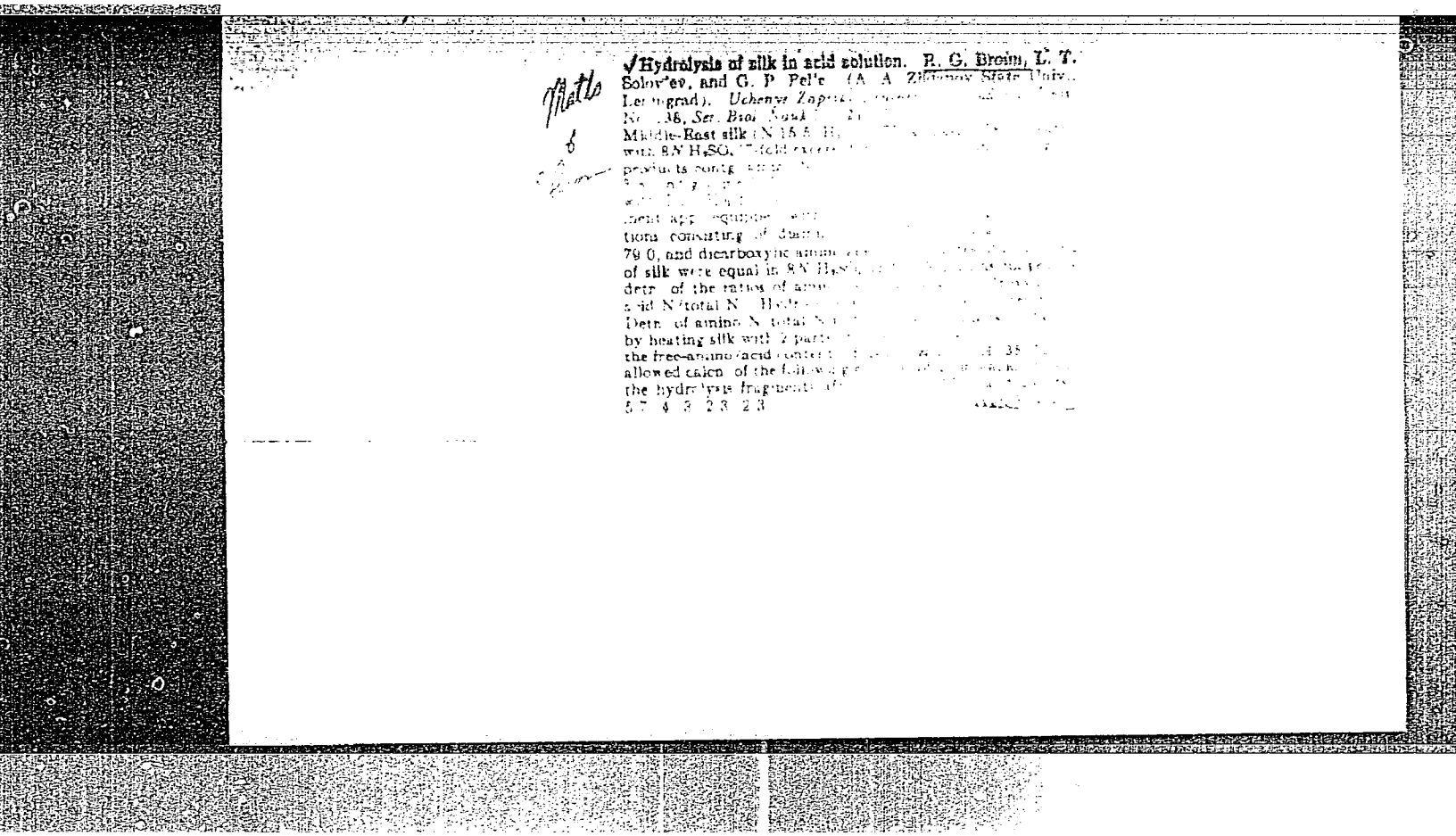
A Sm. SLA METALLURGICAL LITERATURE CLASSIFICATION

BROUN, R.G.

SOLOV'YEV, L.T., professor; BROUN, R.G., assistent.

Instability of the peptide bonds of hydrooxyamino acids in acidic protein hydrolysis. Nauch.biul.Len.un. no.23:47-48 '49.
(MLRA 10:4)

1. Fiziologicheskiy institut im. A.A.Ukhtomskogo, Kafedra biokhimii.
(PEPTIDES) (HYDROLYSIS)



✓Hydrolysis of silk in acid solution. R. G. Broim, L. T. Solov'ev, and G. P Pel'e (A A Zhdanov State Univ., Leningrad). *Uchenye Zapiski* ... No. 136, *Ser. Biol. Nauk* ... Middle-East silk (N 15.5 ... with 8 *N* H_2SO_4 ... products consisting ... tions consisting of diamin... 79.0, and dicarboxylic amino ... of silk were equal in 8 *N* H_2SO_4 ... detn. of the ratios of amino ... acid N/total N. Hydr... Detn. of amino N/total N ... by heating silk with 2 parts ... the free-amino-acid content ... allowed calcn. of the follow... the hydrolysis fragments ... 5.7 4.3 2.3 2.3

BROWN, R. G.

USSR

Further data on the mechanism of acid hydrolysis of proteins on the basis of the products of the partial acid hydrolysis of sericin. R. G. Brown and L. T. Sobol'ev. *Uchenye Zapiski Leningrad. Gosudarst. Univ. im. A. A. Zhdanova* No. 164, *Ser. Biol. Nauk.* No. 32, 377–87(1954). —Sericin obtained from the silkworm was hydrolyzed by H_2SO_4. The hydrolyzate was neutralized with $Ba(OH)_2$, and the basic, neutral, and acidic amino acids were sepd. electrophoretically. The greater part of the N was found in the neutral amino acids of which 50% was in the aliphatic hydroxyamino acid series, 16–18% of the N in the diamino acids, and 11–15% in the acidic amino acids. Since electrophoresis did not always effect a quant. sepn. of the basic, acidic, and neutral amino acids, these fractions were subjected to sepn. by paper chromatography. Lysine and arginine predominated among the basic amino acids, glutamic and aspartic among the acidic, and, among the neutral acids were serine, glycine, threonine, alanine, tyrosine, and possibly leucine. When based on the size of the spots, serine and glycine predominated among the monoamino acids, alanine and threonine followed, and the remaining monoamino acids were present only in small quantities. Other samples of sericin were partially hydrolyzed and analyzed by paper chromatography to show the distribution of the basic, neutral, and acidic fractions. In the acidic and neutral fractions of the partially hydrolyzed protein, a spot with an R_f value of 0.17 was present which disappeared after complete hydrolysis. It was apparently a dipeptide of serine and a dicarboxylic acid. In the neutral fraction threonine appeared weaker. Of the free NH_2 groups of the peptides 45–70% of them belonged to the hydroxyamino acids. Data are presented which show that

(OVER)

there is a significant quantity of monoamino acids in combined form present in both the acidic and basic products of partial hydrolysis, the greater amt. being present in the basic fraction. During partial acid hydrolysis, the acidic amino acids increase; during basic hydrolysis, the basic amino acids increase. William H. Fitzpatrick

BROUN, R.G.

Biochemical characteristics of components of nucleoproteins in brain tissue. Vest.Len.un. 10 no.10:67-75 P '55. (MLRA 9:1)
(Proteins) (Brain)

TRON, Ye.Zh., prof.; BROUN, R.G.; KUTUZOVA, N.I.; ROMANOVA-BOKHON, O.A.; TARTAKOVSKAYA, R.E.

Permeability of the crystalline lens and its capsule. Vop. klin. i eksp. oft. no.2:17-66 '59. (MIRA 14:11)
(CRYSTALLINE LENS)

BROUN, R.G.

Dynamics of changes in the amount of nucleic acids in the brain tissue of rats in the postembryonal period. Nerv. sist. no. 2:11-14 '60. (MIRA 14:4)

(NUCLEIC ACIDS) (BRAIN)

BROUN, R.G.; DYURNBAUM, V.I.

Comparative data on the nucleotide composition of ribonucleic acid contained in the brain tissue. Vest.LGU 16 no.9:100-106 '61.
(MIRA 14:5)

(NUCLEOTIDES) (BRAIN)

3

BRESLER, V. M., BROUN, R. G., PODGAYETSKAYA, D. Ya. and SKVEMBERGER, I. N.

"The Effect of Nucleic Acids Isolated from Tumors on the Reticulo-Endothelial System of Mice." pp. 9

Institute of Cytology AS USSR Laboratory of the Cytology of Malignant Growth and Laboratory of Protein Chemistry of Leningrad State University.

II Nauchnaya Konferentsiya Instituta tsitologii AN SSSR. Tezisy dokladov (Second Scientific Conference of the Institute of Cytology of the Academy of Sciences USSR, Abstracts of Reports), Leningrad, 1962 88 pp.

JPRS 20,634

BRESLER, V.M.; BROUN, R.G.; PODGAYETSKAYA, D.Ya.; SHVEMBERGER, I.N.

Leucosogenic effect of nucleic acids isolated from tumors.
TSitologiia 4 no.3:318-322 My-Je '62. (MIRA 16:3)

1. Laboratoriya tsitologii zlokachestvennogo rosta Instituta tsitologii AN SSSR, Leningrad i Laboratoriya khimii belka Leningradskogo universiteta.
(LEUKEMIA) (NUCLEIC ACIDS)

BROUN, R.G.; KRASNOPEVTSEVA, N.G.

Comparative data on the nucleotide composition of nucleic acids on the cell nuclei of brain tissues. Vest.LGU 18 no.3:90-98 '63. (MIRA 16:2)
(NUCLEOTIDES) (NUCLEIC ACIDS)

BROUN, R.G.; GONCHAROVA, V.P.

Quantitative determination of nucleic acids in the brain tissue.
Ukr.biokhim.zhur. 34 no.5:734-740 '62. (MIRA 16:4)

1. Laboratoriya khimii belka kafedry biokhimii fiziologicheskogo instituta im. A.A.Ukhtomskogo Leningradskogo universiteta.
(NUCLEIC ACIDS) (BRAIN)

GONCHAROVA, V.P. [Honcharova, V.P.]; BROUN, R.G.

Quantitative determination of nucleic acids in the brain tissue. Ukr. biokhim. zhur. 36 no.1:126-131 '64.

(MIRA 17:12)

1. Laboratory of Protein Chemistry of Leningrad State University.

BROUN, R.M., podpolkovnik meditsinskoy sluzhby

Cheng-chiu therapy, an old method of reflex therapy in Chinese popular medicine. Voen.-med.zhur. no.7:22-27 Jl '59. (MIRA 12:11)

(MOXA)
(ACUPUNCTURE)

BROUN, R. M. (Lieutenant Colonel of the Medical Service)

"Experience in the Use of Chen-tsu Therapy /Acupuncture/ in the Hospital"

Voyenno-Meditsinskiy Zhurnal, No. 10, October 1961

BROUN, R.M., podpolkovnik meditsinskoy sluzhby

Use of chen-chu therapy in a hospital. Voen.-med.zhur. no.10:90 O '61. (MIRA 15:5)

(ACUPUNCTURE)

MIKHALKEVICH, M.F., glav. red.; SAFONOV, A.V., red.; [illegible]SKIY, L.I., red.; BROUN, R.M., red.; DOMBELO, I.A., red.; E[illegible]ST, V.F., red.; KRIZHAK, B.Yo., red.; KUZNIKOV, A.N., red.; MEMESHKINA, L.I., tekhn. red.

[The nature of Sakhalin and man's health]Priroda Sakhalina i zdorov'e cheloveka; sbornik statei. IUzhno-Sakhalinsk, Sakhalinskoe knizhnoe izd-vo, 1962. 181 p. (MIRA 15:11)

1. Geograficheskoye obshchestvo SSSR. Komissiya meditsinskoy geografii Sakhalinskogo otdela.
(SAKHALIN—MEDICAL GEOGRAPHY)

BROUN, S.I.; KICHIGIN, A.V.; PERLOV, I.N.

Percussive-rotary drilling of structural-prospecting wells with hydraulic-percussion equipment. Burenie no.10:10-13 '64.
(MIRA 18:6)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhim.cheskoy i gazovoy promyshlennosti im. akad. Gubkina.

BROUN, ZH.L.

Spectral distribution of the intensification of the latent photographic image by the action of light
Usp. nauch. fot., no.1, 1951

Dependence of photochemical latensification of the latent image upon the time of the finishing of the emulsion. Zh. I. Bronn and A. V. Bonin (Alessa Scale Univ., Dok. Akad. Nauk S.S.S.R. 93, 1953). The relation between the degree of chem. ripening of an emulsion and the magnitude of latensification caused by a uniform low intensity 2nd exposure was investigated. The sensitometric exposure was made to white light, and the latensifying exposure (I) of one hour's duration was made to monochromatic light. The max. value, ΔD_0, for the increase in d produced by I in a given series of expts. was selected as the criterion of latensification. If I of energy $E\lambda$ caused an increment, $\Delta D\lambda$, in d. at a certain λ, the exposure $E'\lambda$ necessary to produce ΔD_0 was calcd. from the equation: $\log E'\lambda = \log E\lambda(\Delta D_0/\Delta D\lambda)$. The spectral latensification coefd. was defined as $S'\lambda = 1/E'\lambda$. The dependence of log $S'\lambda$ and of the initial sensitivity of the emulsion on λ is similar. Exptl. data are presented for $S'\lambda$ values detd. at 460 mμ, for emulsions which are not optically sensitized. $S'\lambda$ at first increases with increasing time of chem. ripening. When the emulsion is not Au sensitized, the max. in $S'\lambda$ and in sensitivity to the primary exposure are reached at about the same time of chem. ripening. When the emulsion is sensitized with Au, the max. $S'\lambda$ is reached before the max. sensitivity. Optically sensitized emulsions show a more complex picture. The latensification effect is greatest in the wave-length range corresponding to max. optical sensitization.

T. H. James

Investigation by an optical method of the process of development of photographic layers. Zh. L. Brown and E. A. Nesterovskaya. *Sbornik Fiz.-Mat. Fak. i Nauch. Issledovatel. Inst. Fiz.* [illegible]

[illegible] with [illegible] the [illegible] in the region 370–780 mμ. [illegible] the undeveloped [illegible] light transmitted by the [illegible] spectrum of a developed [illegible] analogous to the structure of the absorption spectrum of photochem. coloration and latent image. The positions of the max. of absorption coincide in all of the spectra studied. With increasing [illegible] fine structure [illegible] increases. Simultaneously [illegible] of Ag in formulas where [illegible]

[illegible]

BROUN, Zh. L.

USSR/ Physics - Spectrophotometry

Card 1/1 Pub. 43 - 28/62

Authors : Kirillov, Ye. A.; Broun, Zh. L.; and Chibisov, K. V.

Title : Employment of the spectrophotometric method for the study of the chemical sensitization of photo emulsions

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 689-690, Nov-Dec 1954

Abstract : A differential spectrophotometric method, developed by Ye. A. Kirillov was utilized for the first time for the study of centers formed during chemical, reduction and sensitization processes of silver bromide emulsions. The sensitization was accomplished by immersion of the layer in a hydrazine solution. The effects of sensitization and aging were determined spectrophotometrically and then compared photographically for the purpose of determining the light sensitivity of the emulsions. Results obtained are briefly described. One USSR reference (1951). Graph.

Institution : The I. I. Mechnikov State University, Physics Inst., Odessa

Submitted : .....

BROUN, ZH. L.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 27/48

Authors : Kirillov, E. A.; Broun, Zh. L.; and Chibisov, K. V., Memb.Corres. of AN SSSR

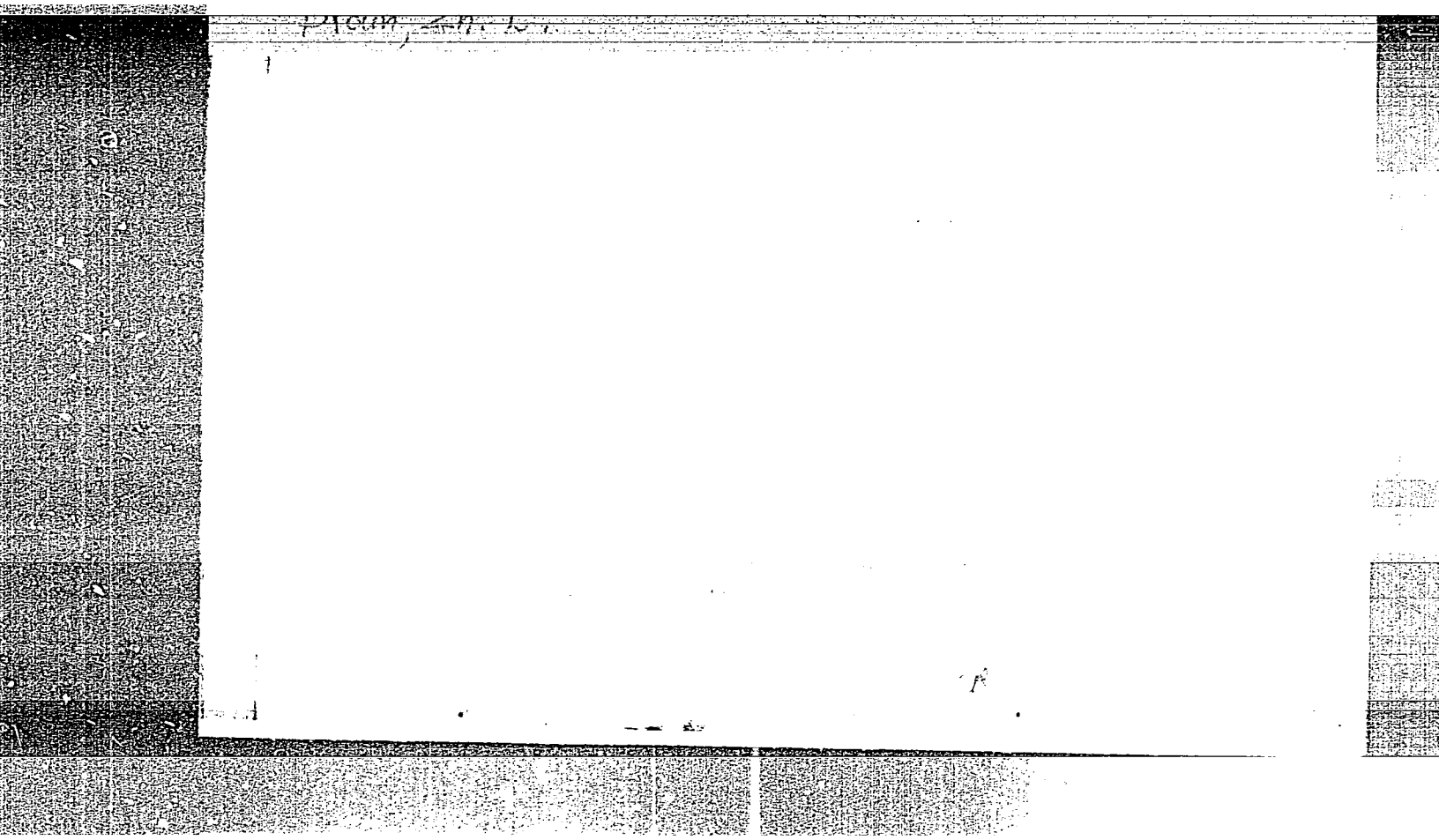
Title : Study of the chemical sensitization of photo emulsions. Effect of the reducing agent.

Periodical : Dok. AN SSSR 98/3, 427-430, Sep 21, 1954

Abstract : Reduction sensitization experiments by treating a Lippmann AgBr emulsion in the form of layers applied on glass slides, with a hydrazine ($N_2H_4 \cdot H_2SO_4$) solution, are described. The absorption spectrum of the emulsion layer, treated in a hydrazine solution, was measured and the results are shown in graph. It was found, on the basis of spectrophotometric measurements, that the physical essence of sensitization with hydrazine consists in the formation of silver centers which increase in number and size during increase in concentration of the solution. Three USSR references (1948-1953). Graphs.

Institution: The I. I. Mechnikov State University, Physics Institute, Odessa

Submitted : May 6, 1954



BROUN, ZH. L.

Subcenters of latent photographic image. Zh. L. Braun and A. B. Gol'denberg. *Uspekhi Nauch. Fot., Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 3, 35–8(1955). E. M.

(1)

An investigation of the chemical sensitization of a photographic emulsion. The effects of compounds with labile sulfur. E. A. Kirillov, Zh. L. Breun, and K. V. Chibisov (I. I. Mechnikov State Univ., Odessa). *Doklady Akad. Nauk S.S.S.R.* 102, 1159-62(1955); cf. *C.A.* 49, 12698*f*.—The role of labile S in the chem. sensitization of photographic emulsions was studied by the same spectrophotometric method as used by the authors to investigate reduction sensitization (*C.A.* 49, 12698*f*). Thin layers of Lippmann AgBr emulsion were treated for 1 min. at 20° with solns. of thiourea contg. 0.2×10^{-7} and 0.3×10^{-4} mole/l. Comparison of absorption spectra relation with photographic properties indicates the formation of new activity centers in alk. solns., similar in properties to those formed by N_2H_4. When the Lippmann emulsion was treated with thiourea at its own pH, an "inverted" spectrum of fine structure was obtained, indicating a destruction of the primary centers. With a thiourea concn. of 0.3×10^{-4} the light sensitivity of the emulsion was somewhat increased, but with 0.3×10^{-3} mole/l. it dropped to almost 0. Some supplementary assumptions are suggested to Mitchell's conception of "positive hole" traps as contributing to light sensitivity (Evans and Mitchell, *C.A.* 48, 5097*b*). Ag centers formed in the normal emulsion are formed during the initial ripening principally inside the crystals and act as the acceptors of the "positive holes" and of the Br atoms. Relatively large amorphic Ag centers, located principally on the surface, are the acceptors of the photoelectrons. While both kinds of centers are photoactive, they differ in their functions. The role of S compds. (and of N_2H_4) consists in the acceleration of the chem. ripening at the cost of an increased concn. of at. Ag centers. W. M. Sternberg

Category : USSR/Optics - Scientific photography

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2658

Author : Broun, Zh.I., Kirillov, Ye.A., Chibisov, K.V.
Inst : Physics Inst. of the Odessa Univ., USSR
Title : Spectrophotometric Investigation of Chemical Sensitization of Photographic Emulsions.

Orig Pub : Zh. nauch. i prikl. fotogr. i kinematogr., 1956, 1, No 2, 98-110

Abstract : Chemical sensitization was studied with layers of Lipman emulsion, first processed in a solution of hydrazine, tin chloride, thiourea, or thiozinamine at 20° for 10--30 minutes. After the layer was washed and dried, the absorption spectrum was determined with a double monochromator from the ratio to the unprocessed layer in the 400--800 mu region, with intervals of 2.5--5 mu (using the Kirillov method). To determine the photographic action of these solutions, the compounds were exposed and developed in a glycin developer. The light sensitivity was determined from the threshold (using the Eder-Hecht wedge). It was established that when the layer of Lipman emulsion is treated with reducers (hydrazine, tin chloride) or with compounds with labile sulphur (thiourea or thyozinamin in alkaline medium) in certain concentrations, one observes a fine spectral structure, coinciding with the structure produced by photochemically-dying silver bromide or by vacuum spattering of silver. An analogous

Card : 1/2

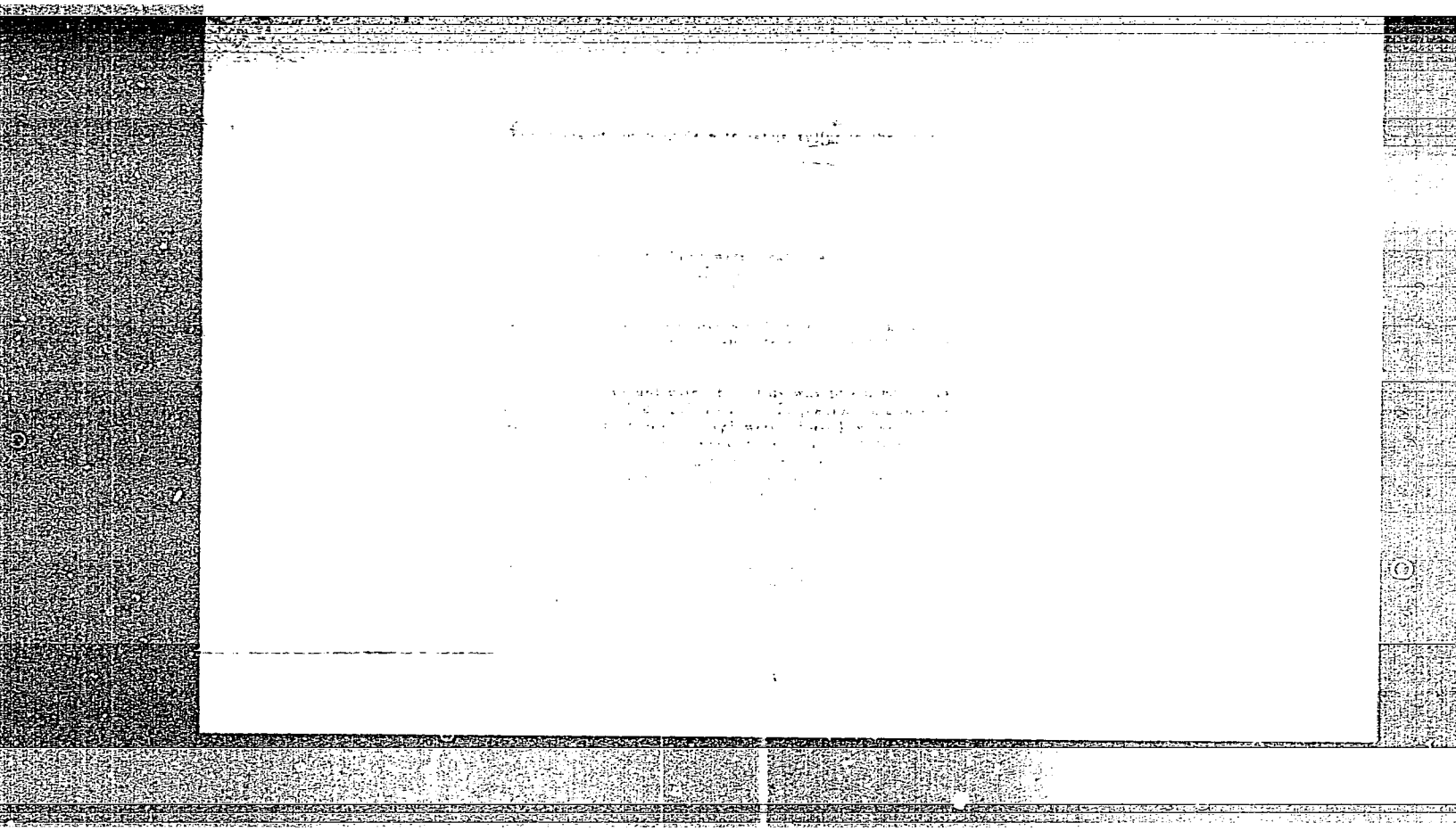
Category : USSR/Optics - Scientific photography

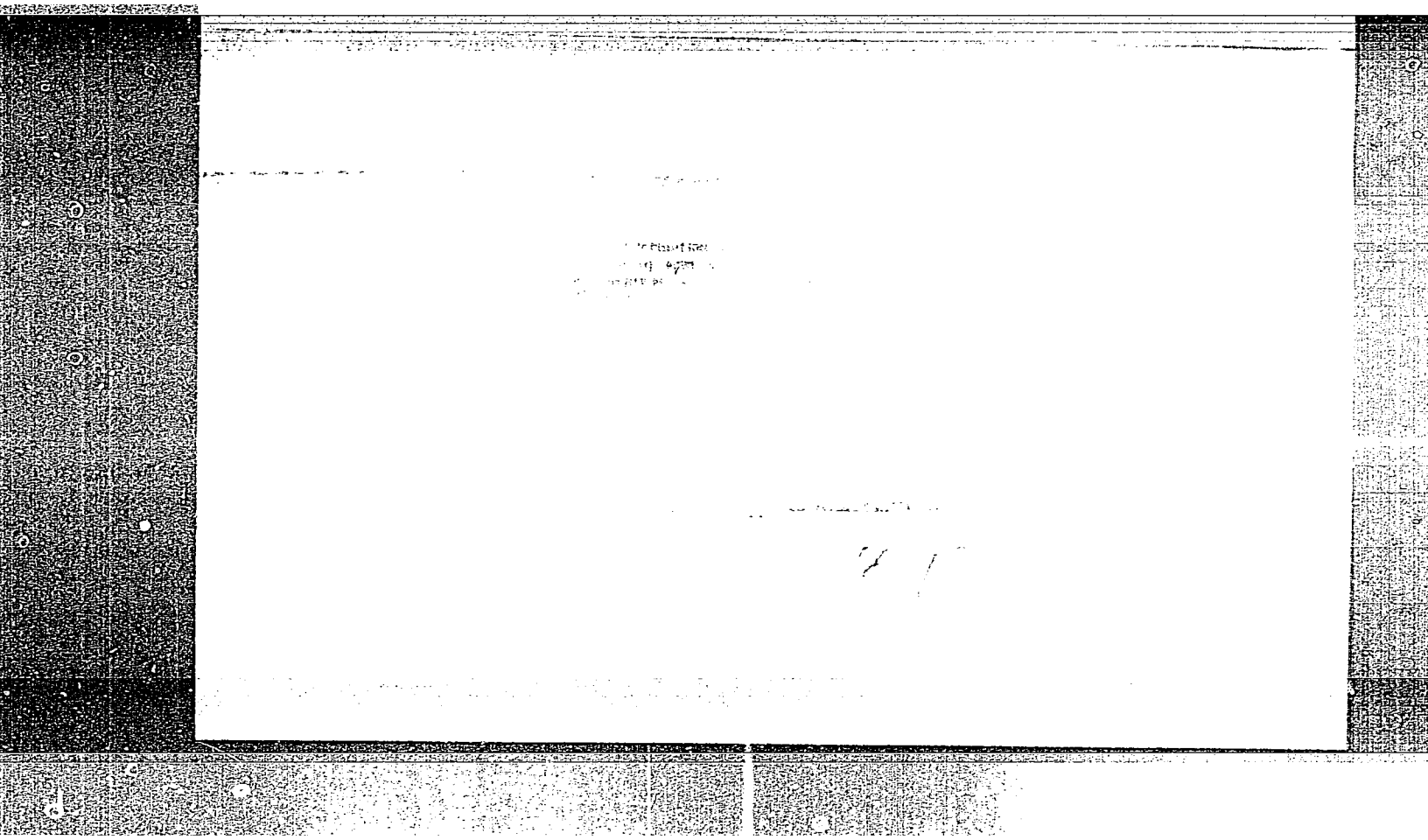
K-11

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2658

spectral picture is observed upon accelerated "aging" of layers of Lipman emulsion (the compound of the unprocessed emulsion was heated 5--25 hours in a thermostatic bath at 52°), which can be considered as a model of the second maturation. This izduces the authors to assume that silver centers occur also in the second maturation and chemical sensitization of emulsion layers, as they do in photolysis. When sulfide compounds in acid medium act on the layers of the Lipman emulsion one observes a "reversed" spectrum of the fine structure, owing to the destruction of the primary silver centers. The data obtained are in agreement with the deductions by K.V. Chibisov (Ref Zhur Fiz 1954, 4472) concerning the reducing of chemical maturation.

Card : 2/2





AUTHOR: Broun, Zh.L.

SOV 77-3-4-2/23

TITLE: A Study of the Primary Centers Formation Process in a Working Emulsion (Issledovaniye protsessa obrazovaniya pervichnykh tsentrov v real'noy emul'sii)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1958, Vol 3, Nr 4, pp 246-250 (USSR)

ABSTRACT: In order to clarify the mechanism of the growth of centers of photosensitivity, the author undertook a study of the chemical maturation process of a working emulsion, using for this purpose Ye.A. Kirillov's differential spectrophotometric method. Silver bromide emulsion was coated on gelatine, and the plates subjected to different second maturation periods, thus giving samples with varying photosensitivity. Spectral curves were then drawn up using a spectrophotometer. An impurity spectrum curve was also prepared. It was found that photosensitivity reaches a maximum in the short-wave section of the spectrum and then decreases. During the chemical maturation the spectral curves show at various moments a characteristic change. This can be explained by assuming that a redistribution of metallic silver takes place in the impurity centers. The author assumes that

Card 1/2